T697 (RGB) i21

CV Led Controller

User Manual

Please read this manual carefully before using this controller.

Instructions:

Thanks for using T697 (RGB) i21 controller of our company. Before installation, please read this manual carefully to ensure fully understand and proper use in order to avoid unnecessary damages to the controller.

Before using, please check to confirm whether there is any damage caused during the transport process, if there is, please notify your supplier and do not use the product.

After-sale services:

Warranty of this product is one year, in this period we guarantee repairing or replacement service with no charge if it is normally used according to the instruction.

If the customer does not follow the instructions and following provisions in this manual, which results in product damage, the supplier is not responsible for any problems arising and defects, even in the warranty period, maintenance costs borne by the customer.

1. Damage caused by misuse, such as not in accordance with the instructions.
2. Damages caused by unauthorized removal, repair, modify of the circuit; incorrect connection and replacement of the chips.
3. Damage caused by transportation, shock, falling after purchase.
4. Damage caused by earthquake, fire, flood, lightning and abnormal voltage.
5. Damage caused by negligence or improper maintenance, such as storage at high temperature and humid environment, vicinity of hazardous chemical substances.
6. Replacement of products.

Instructions for safety:

Making sure you use the product perfectly and safely, please observe the instructions and warning on this manual. Attention! Operate cautiously and read these instructions carefully.

1. For installation, try to avoid the minefields, strong magnetic field and high-pressure area.
2. Ensure that the wire is connected correctly and firmly in order to avoid short-circuit damage to parts and posing a fire hazard.
3. Please install controller in a well-ventilated place to ensure the ambient temperature is moderate.
4. Before using this product, please check the DC power and voltage meet the product technical requirements; positive and negative polarity is defined consistent to the product.
5. Prohibit live wiring, check to confirm wiring is correct, if no short-circuit, then power!
6. If any problems do not make unauthorized repairs. Any doubts please contact your local supplier.

This manual applies only to this product of our company, subject to changes without notice.

Introduction

T697 (RGB) i21 multifunction RGB led controller is a DIY controller with strong combination ability. It's used to control RGB led light (common anode), with 18 modes choice, function keys on the panel, and IR remote is also optional, convenient and practical.

1. Technology specifications

Type	T697(RGB)i21
Input power	DC12V~24V
Output signal	Three ways RGB
Max load current	5A*3
Mode	18 kinds
Grey scale	256 levels for each R,G,B
Dim level for static color	16 levels for each R,G,B
Controller dimension	L145*W74.2*H32.5(mm)
Remote dimension	L84*W40*H7(mm)
Packing dimension	L80*W60*H140(mm)
Net weight	225g

2. Functions

(1).21-key IR remote, valid in 8 meters (without barriers)

(2).Many DIY preservation keys, users can choose favorable light for cyclic change.

(3). 0~100% brightness dim for each of R, G, B, and 16 levels light brightness, can mix out 4096 colors.

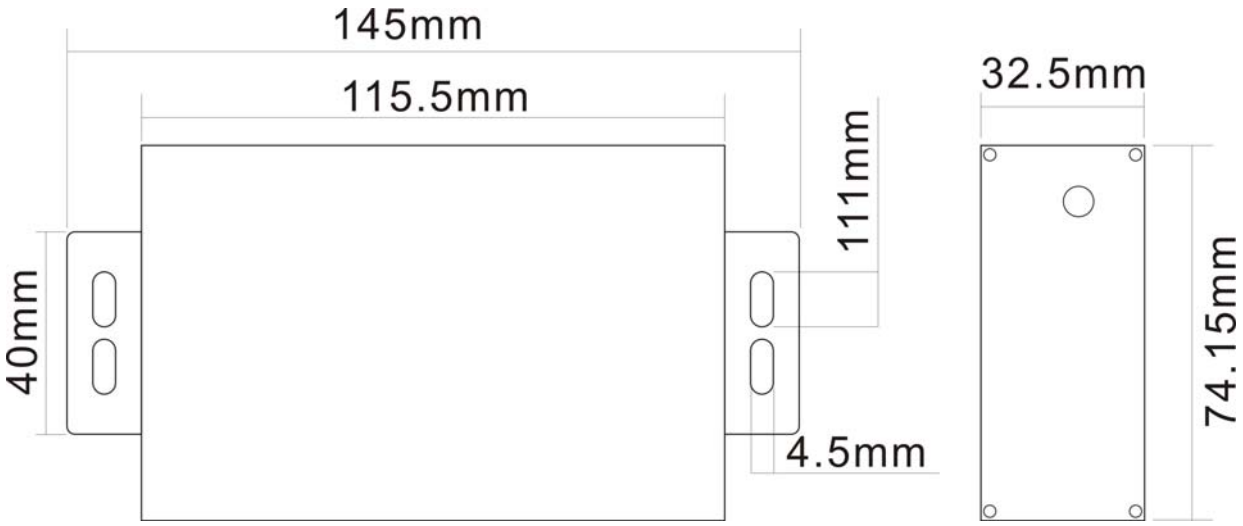
(4).256 levels of grey scale for each of R, G, B to make out comfortable and delicate light effects.

(5). Can choose the changing speed and brightness of each mode separately.

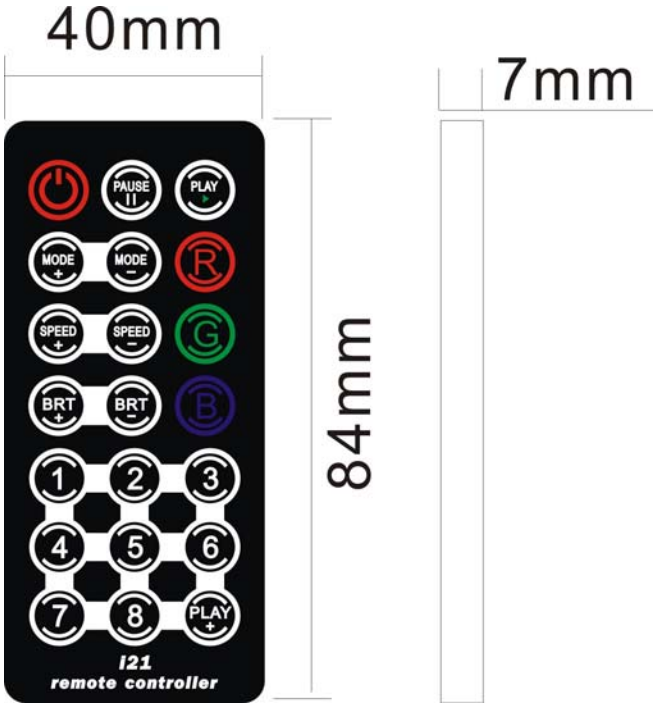
(6). Pause function can keep the current grey scale and color of the led light.

3. Structure

(1).View of major controller：（chart 1）

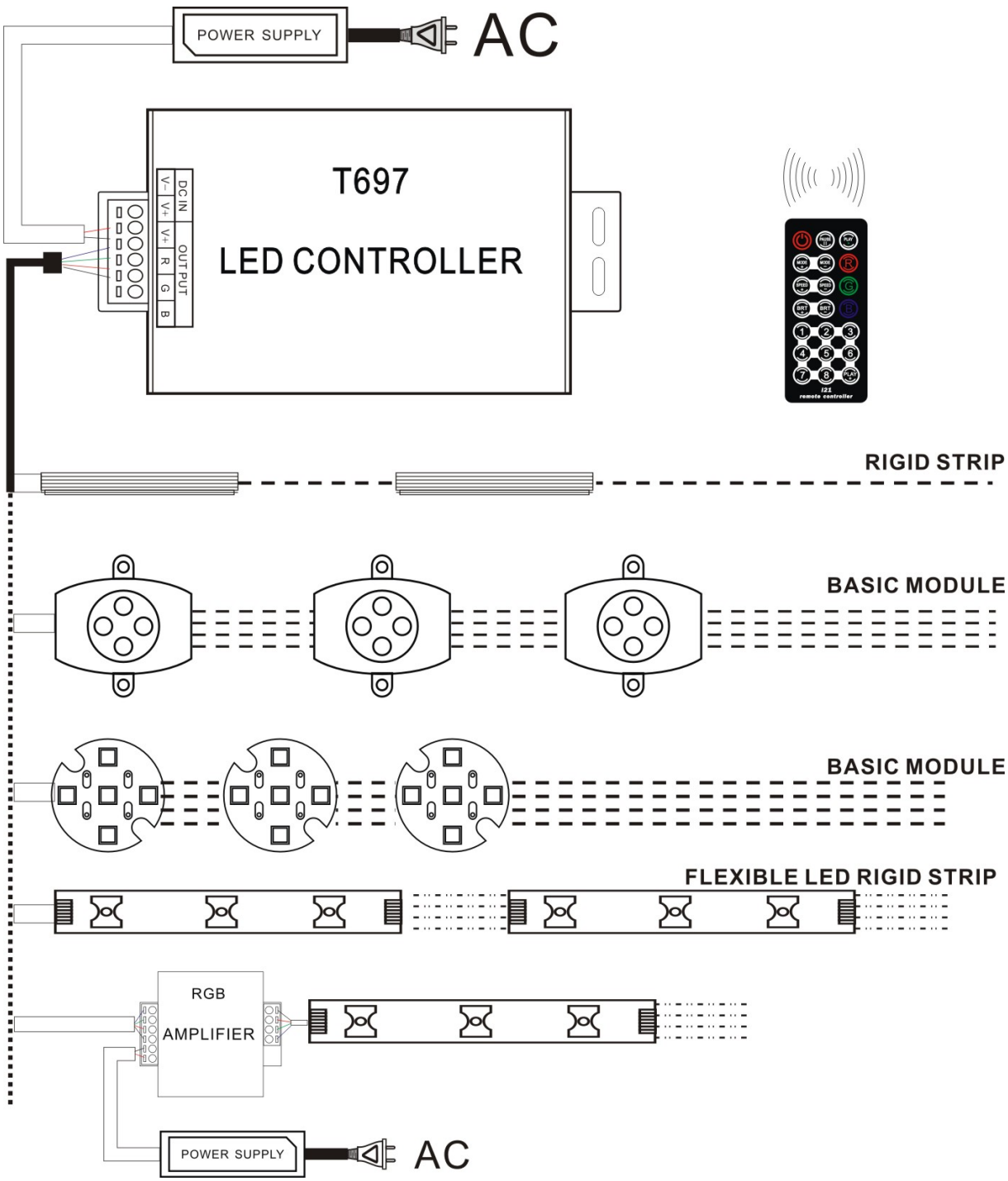


(2). View of remote controller (chart 2).

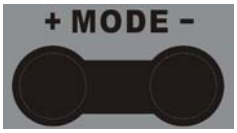
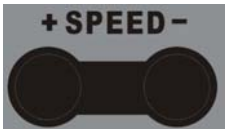
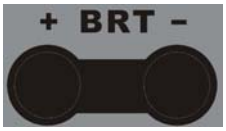


4. Connection diagram of controller

(1).Connection diagram to low power LED: （chart 3）



(2).Descriptions for keys on controller. (Table 1)

Symbol	Name	Description
	OFF	On/off : turn on or off the controller Under Off state, press any key to start the controller
	PAUSE	Pause: press this key to keep the current color of the led light, press this key again or any other key to continue the color changes. Other function: press this key long for 3 seconds, open and close the buzzer.
	MODE+/- MODE-	Mode +/-: Press these two keys to choose modes (pls refer to the mode table), press long for 3 seconds, the controller moves to the cycle mode automatically.
	SPEED+/- SPEED-	Speed+/-: press these two keys to speed up or speed down. Press long for 3 seconds, the current change speed will recovery to the factory default speed. (fastest)
	BRT+/- BRT-	Brightness +/-: press these two keys to up or down the brightness of the led light. Press long for 3 seconds, the current brightness will recovery to the factory default brightness (brightest)
	DIY mode save key	Press the key long for 3 seconds, the green light flashes twice fast, the controller will save the current effect to the key automatically, totally 4 kinds modes, usually, press once to enter the saved modes before.
	PLAY	Play: Cycle play the 4 DIY effects saved in DIY modes keys.
	RGB color mix key	1. Press continuously to change the brightness of RGB, can make out different colors according to any ratio. 2. In the state of R, G, B light diming, press BRT+ or BRT- also can change the brightness of the light.

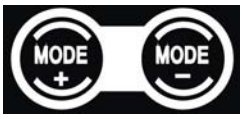
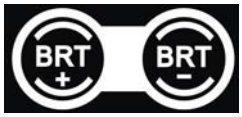
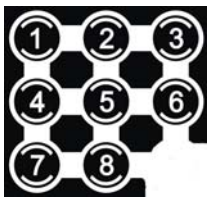
Tip: Functions of 1-4 DIY keys on the controller and 1-4 DIY keys on the remote are the same.

The PLAY key is only valid for dynamic light effects, if static colors saved in the DIY keys, when press PLAY key will skip the static colors.

Mode Table

Order	Mode	Description	Remark
1	Static red	Red is always on	Brightness is adjustable
2	Static green	Green is always on	Brightness is adjustable
3	Static blue	Blue is always on	Brightness is adjustable
4	Static yellow	Yellow is always on	Brightness is adjustable
5	Static purple	Purple is always on	Brightness is adjustable
6	Static cyan	Cyan is always on	Brightness is adjustable
7	Static white	White is always on	Brightness is adjustable
8	3-color gradual change	RGB jump change(chasing)	Brightness and speed are adjustable
9	7-color jump change	7-color jump change	Brightness and speed are adjustable
10	White flickers	White flickers	Brightness and speed are adjustable
11	R-G-B gradual change	R-G-B gradual change	Brightness and speed are adjustable
12	Full color gradual change	Full color gradual change	Brightness and speed are adjustable
13	RG gradual change	R-G gradual change	Brightness and speed are adjustable
14	RB gradual change	R-B gradual change	Brightness and speed are adjustable
15	GB gradual change	G-B gradual change	Brightness and speed are adjustable
16	White gradual change	White fade in and out	Brightness and speed are adjustable
17	Cycle mode	Cycle change of all effects	/
18	RGB static color mixing	4096 colors choices	16 levels of brightness of R, G, B

(3).Descriptions for remote (Table 2)

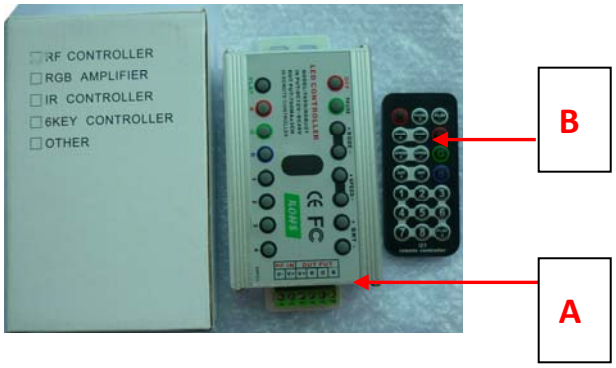
Symbol	Key name	Description
	ON/OFF	On/off : turn on or off the controller Under Off state, press any key to start the controller
	PAUSE	Pause: press this key to keep the current color of the led light, press this key again or any other key to continue the color changes. Other function: press this key long for 3 seconds, open and close the buzzer.
	MODE+ MODE-	Mode +/-: Press these two keys to choose modes (pls refer to the mode table), press long for 3 seconds, the controller moves to the cycle mode automatically.
	SPEED+ SPEED-	Speed+/-: press these two keys to speed up or speed down. Press long for 3 seconds, the current change speed will recovery to the factory default speed. (fastest)
	BRT+ BRT-	Brightness +/-: press these two keys to up or down the brightness of the led light. Press long for 3 seconds, the current brightness will recovery to the factory default brightness (brightest)
	DIY mode save key	Press the key long for 3 seconds, the green light flashes twice fast, the controller will save the current effect to the key automatically, totally 8 kinds modes, usually, press once to enter the saved modes before.
	PLAY	Play: Cycle play the 4 DIY effects saved in DIY modes keys.
	PLAY+	Play+: Cycle play the 8 DIY effects saved in 1-8 DIY keys on the remote.
	RGB color mix key	1. Press continuously to change the brightness of RGB, can make out different colors according to any ratio. 2. In the state of R, G, B light diming, press BRT+ or BRT- also can change the brightness of the light.

5. Failure analysis and solutions (Table 3)

Failure	Analysis	Solutions
No light	1. No power. 2. Reversed the polarity. 3. Wrong connection or poor contact.	1. Check the power 2. Make sure the polarity is right. 3. Re-check the wire connection.
Brightness of LED is not consistent	1. Input wire is too long to cause wire loss. 2. Diameter of wire is too thin to cause wire loss. 3. Power overload. 4. Controller overload.	1. Shorten wire or use loop circuit. 2. Calculate the current, and then replace thick wire. 3. Replace larger power. 4.Add a power amplifier

6. Packaging

(1).Packaging details (chart 4).



(2).Packaging list (Table 4).

Symbol	Name	Picture	External dimension(mm)	QTY	Unit
A	T697(RGB)i21-Controller		L145×W74.2× H32.5(mm)	1	PCS
B	I21 (remote)		L84×W40×7(mm)	1	PCS

(3).Packaging

1). 20pcs/carton